

KNOWLEDGE, ATTITUDE AND PRACTICE OF CONDOM USAGE AMONG TERTIARY INSTITUTIONS STUDENTS ON TRAINING AT NATIONAL INSTITUTE FOR PHARMACEUTICAL RESEARCH AND DEVELOPMENT (NIPRD), ABUJA, NIGERIA

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Tertiary institutions students represent a sexually active segment of the Nigerian population. Their acceptance of condom use would help to reduce the spread of HIV and sexually transmitted diseases (STDs). This study was conducted to explore the knowledge, attitudes and practices of condom among tertiary institutions students on training at National Institute for Pharmaceutical and Development (NIPRD), Abuja, Nigeria. This is an institutional descriptive cross-sectional study of 410 student's respondents. Samples were taken using systematic random sampling techniques between June and August, 2019. Data analysis employed SPSS version 20.0. Majority of the student's respondents 176 (82.2%) were age 22 - 26 years, 390 (95.1%) were not married, 218 (53.2%) resides off campus and most, 390 (95.1%) were Christians. All respondents were knowledgeable about condom. The major source of information was mass media 94 (22.9%). The major reason for using condom was for prevention of HIV/STDs (76.5%). Awareness of condom use among the student's respondents has increased. However, there is still a gap between its knowledge and practice which needs to be addressed because its public health significance in the prevention and control of HIV/STDs menace in Nigeria.

Keywords: STDs, HIV, Condom, Sexually active, Mass media, Attitudes, Practices.

INTRODUCTION

The Joint United Nations Programme on HIV/AIDS (UNAIDS) 2016 – 2021 strategy set a worldwide target to increase the condom availability to 20 billion/year by 2020 in low and middle-income countries (e.g. Nigeria). This is to achieve 90% condom use during the sexual activity with a non-

regular partner (UNAIDS, 2016). National HIV/AIDS Prevention Plan in 2014 – 2015, the Federal Government of Nigeria planned through various measures including condom programming and the promotion of the dual protective benefits of condoms, Prevention of inadvertent pregnancies, HIV and

sexually transmitted diseases (STDs) to reduce the national Human Immunodeficiency Virus (HIV) incidence rate to minimal value (NACA, 2014; UNAIDS, 2015) since it is reported that latex condoms have over 85% protective effect against HIV and STDs (WHO, 2016).

Globally, youth's population are more sexually active than any other subgroup (Fagbamigbe et al., 2011). There is increase of sexual activities among the youth globally including Nigeria (Abiodun and Balogun, 2009; Fagbamigbe et al., 2011; Alika, 2012). This acts usually exposed high numbers of young ones to the various risk of HIV/AIDS, STDs and unwanted pregnancies. This may be attributed to the fact that most students in the universities are first timer to start living independently away from their parents or guardians or care givers.

Condoms are the most effective means of HIV/AIDS, STDs and unwanted pregnancy prevention. Their usage has increased greatly over the past decade. Condoms acts by blocking or creating barrier in which fluid (semen, anal mucus, vaginal mucus, menstrual fluid or blood) transfer between sexual partners of one person is usually prevented from coming into contact with a mucous membrane of the sexual partner (Dodds, 2010). Barrier methods, particularly condoms, protect against HIV, STDs and cervical cancer (CDC, 2013). Some laboratory studies have demonstrated that latex condoms provide an essential impermeable barrier to particles the size of STD pathogen, human papilloma virus and HIV (CDC, 2013). Polyurethane and Latex condoms provide the best available protection against HIV/AIDS and STDs (ACOG, 2011).

Correct and consistent condom use is now the most effective (100%) measure to prevent HIV and STDs infection among sexually active people (Shisana et al., 2014). Hence, condom use promotion has also received most needed attention in the fight against the deadly HIV/AIDS pandemic (WHO, 1995). This is particularly important in sub Saharan Africa countries like Nigeria where the leading means of HIV mode of transmission is mainly through sexual contact. Although, consistent and correct use of the condom has been documented to have a high efficacy rate of 98% (Trussed et al., 1990; Brien et al., 1994; Zimmerman and Olson, 1994). The disadvantages of low condom usage include increased risk of transmission of HIV, STDs and unplanned pregnancies with increased chances of maternal and infant mortality (WHO, 2010).

HIV infection prevalence rate among Nigeria adults aged 15 to 49 is 1.4% and estimated 1.9 million people were still living with this virus; with the South-South and North Central Zones of the country having the highest HIV prevalence, at 3.1% and 2.0% respectively (UNAIDS, 2019). However, condom use in Nigeria has still remained very low, especially among Nigerian populace in some stable relationships. Van Rossem and co-workers in their study in 2001 reported that about 90% of the respondents never used condoms and only 2% were reported to be consistent in the usage (Van Rossem et al., 2001), despite the reported promotions of its usage by the non-government associations (NGOs), federal government of Nigeria and international organizations in order to control the spread of this menace (HIV/AIDS). Although, some NGOs in the past have provided free condoms for the public, this NGOs include the Society for Family Health (SFH), Family Health International (FHI) and the Planned Parenthood Federation of Nigeria (PPFN). Furthermore, the Department for Community Development and Population Activities (DCDPA) also provided free condoms for the public. People living with HIV should be advised to use condoms to prevent and avoid further transmission of HIV, superinfection with different HIV strains, and acquisition of other STDs (National Guidelines, 2013). The use of condoms has other additional advantages especially in the birth control (easy access, simple disposal, low cost, noninterference with breastfeeding, its non-systemic action and minimal side effects). Condoms are also reported to improve sexual pleasure by minimizing the anxieties about the risk of infection of HIV/STDs and pregnancy (Trussell, 2011).

The relationship between being unmarried and an increased likelihood of condom usage has been documented by Hendriksen et al., 2007 and Chandran et al., 2012. Reasons for this may include the fact that unmarried individuals reported that they use condoms more frequently than married individuals do with their spouse (De Walque and Kline, 2009). This can be due to untold fear of HIV/STIs, unwanted pregnancies, and associated societal disapproval. One of evidence that supports this observation comes from literature which shows that married men from most countries reported using condoms with extra marital partners are frequently the unmarried men (Sunmola et al., 2007; De Walque and Kline, 2009). Although, in a study carried out by Ismael and co-workers in 2012, it revealed a contrary

finding showing that the highest level of condom use was among married men (Ismael et al., 2012). This can be explained by the fact that the religious and cultural structure of the Egyptian society strongly, openly, and even with some measure of hostility disapproves of sex among singles and so proving to be a major deterrent for condom purchase by an unmarried person. Another major reason why condom is used especially among married couples is the presence of perceived health-related challenges associated with a woman's use of hormonal contraception. In fact, the most frequently cited circumstance to condom use arises when a woman cannot use family planning oral contraceptives. In this case, condom is seen as a second-choice method with no physiological side effects. Condom use by most men are believed to be an act of "sacrifice" to prevent pregnancy when other choice is not available (Adejoh and Uchenna, 2011). The low condom utilization rate among married respondents may be due to a low male attitude and practice in family planning related issues. This has implications for maternal morbidity and mortality, birth control, and the economy at large.

There are some reported limitations for condom usage, this include irritation and sensitivity to latex, non-cooperative partner, difficulty using condoms correctly and having to use a new condom with every sex act. Condom may also expose a woman's immune system to semen during unprotected sex, this may decrease the risk of pregnancy complications like miscarriages and pre-eclampsia in subsequent pregnancies, thus, interfering with the process of paternal tolerance (Einarsson et al., 2003). Exposure to partner's semen continuously has a better protective effect against pre-eclampsia, that are due to the absorption of several immune modulating factors present in seminal fluid (Matter et al., 2005).

Youths account for the high proportion of new HIV infection cases and estimated 39% of this new infection cases during 2006 to 2009 in the United States were among persons at aged group 13 - 29 years (Cai et al., 2013). Although, it is documented that youths have high levels of awareness about sexual behavior but little in-depth knowledge about HIV and pregnancy prevention and control (Bankole et al., 2007). The sexual behaviour and activities of tertiary institution students contributes to the high proportion predisposes of this country (Nigerian) population to HIV/AIDS, STDs, unwanted pregnancy and unsafe abortion with its associated morbidities

(Ekanem et al., 2003, Ekanem et al., 2005; Ezegwu et al, 2005).

There is still need for consistent and correct usage of condom, more especially among youths that are sexually active, despite reduction in the HIV prevalence of this great country (Nigeria) to 1.4% in 2019 (UNAIDS, 2019). It is also of paramount importance since condom is a veritable instrument in prevention and control of unwanted pregnancy and the unpleasant sequelae of unsafe abortion and maternal death. Its simultaneously function in prevention of HIV, STDs as well as contraception makes it very important especially for the youths and adolescents who are at high risk of HIV, STDs and unwanted pregnancy. The industrial training students of tertiary institutions in Nigeria mostly fall into this age category. Studies on condom usage among industrial training students from university populations are limited, despite the vulnerability of students to unsafe sexual practices. Some previous studies have shown a low prevalence of consistent condom usage among undergraduate students (NPC, 2009).

This study is of paramount importance in ascertaining the knowledge, attitude and practice of students on industrial work experience at National Institute for Pharmaceutical Research and Development (NIPRD), Abuja as this will reveal the prevailing trend in condom usage in this category of populace. The findings from this present study will help in planning about some specific healthcare centre approaches in further reducing mitigating the scrub of HIV/STDs menace in Nigeria. Therefore, this study is aimed at assessing the general knowledge, attitude and practice of condom usage among tertiary institution students on industrial training at NIPRD, Abuja, Nigeria.

MATERIALS AND METHODS

Study Area, Design and Period

This study was carried out at NIPRD, Abuja, Nigeria. NIPRD was established in the year 1988 with five technical departments and with a total of 199 staff in 2019. It is one of the HIV care and treatment centres, highest medical research and referral institution in Nigeria charged with the responsibility to conduct research into diseases of public health importance. This research institute principally provides the research backup and referral centre for both local and

international pursuits in academic and other related research activities of national interest. It is located in Abuja. Abuja is the Federal Capital City of Nigeria. The city is lying between latitude 8° 25' N and 9° 20' E of the equator and longitude 6° 45' N and 7° 39' E and located at the centre of the country with an area of approximately 7,315 km², of which the actual city occupies 275.3 km². It is found in the Savannah area with moderate climatic weather conditions. The capital city is located at the north of the confluence of the River Niger and Benue River (NPC, 2014).

Institutional descriptive cross-sectional study design was employed between June and August, 2019 in which pre-tested standard questionnaires with both open and close ended questions were administered to students on industrial training from various tertiary institutions in Nigeria. Information were obtained on their level of knowledge, attitude and practice on condom as well as their sources of information regarding its usage.

Study population and Sample size determination

The population of the study participants consisted of both male and female students from various tertiary institutions in Nigeria, which seek for industrial work experience scheme (SIWES) training placement to the institute.

The minimum sample size was obtained using the formula for cross-sectional study designs.

$$N = Z^2pq / d^2$$

Where: N = Minimum sample size; Z = the standard normal deviation corresponding to 95% levels of significance (1.96); P = prevalence of condom utilization (46.9% or 0.469) (Girma et al., 2004).

$$q = 1 - p = 0.531$$

$$d = \text{degree of precision} = 0.05$$

$$N = (1.96)^2 \times 0.469 \times 0.531 = 0.9567 / 0.0025 = 383$$

We added 7% of this value to cover for attrition and non-responses, giving a value of 410. Therefore 410 students were selected for the study to allow for non-responses.

The institution usually has students on industrial training population of over 600 per annual from the five technical departments. Forty-one students (n = 41) were randomly selected from each technical department for the study.

Ethical issues and Informed consent

Ethical clearance and approval for the study was secured from the Health Research and Ethics

Committees (HREC) of Federal Capital Territory, Abuja and was endorsed by the authority of the institution where the cross-sectional study was developed and to be carried out.

Informed consent was obtained from the recruited students after they were sufficiently counseled on the objectives and importance of the study. They were assured of the confidentiality of information that they provided in the questionnaire during and after the study.

Instruments for Data Collection

A well-researched structured self-administered questionnaire was developed to collect socio-demographic characteristics of all students who consented to participate in the study. The questionnaire was pre-tested on 25 students prior to the study in the institute. The necessary modification and corrections were made following the pre-test outcomes. The final questionnaire obtained information on their socio-demographic profile, their knowledge on condom including their sexual history. Respondents were asked if they knew about condom and were asked to rate their knowledge on condom as excellent, very good, good, fair and poor. This was regarded as perceived knowledge. Questions was asked to assessed condom usage, reasons for using condom, consistent and correct usage, and reasons for inconsistent use of condom.

The following terms were defined for the purpose of this study: None use of condom was defined as instances where respondents never used a condom with a partner in the last 3 months; Inconsistent condom use was defined as instances where students reported having used condoms sometimes or often but not for every act of sexual intercourse in the last 3 months; Consistent condom use was defined as instances where respondents always used condom during sex in the last 3 months and; Correct use of condom involves consistent use without any of the following: beginning sex without a condom; taking it off before finishing sex; flipping it over; washing and reusing a condom; condom slippage or breakage (Warner et al., 1988).

The completed questionnaires were examined for completeness and all (410) questionnaires were filled and returned for statistical analysis.

Data Analysis

Data was entered into Excel Software and analyzed

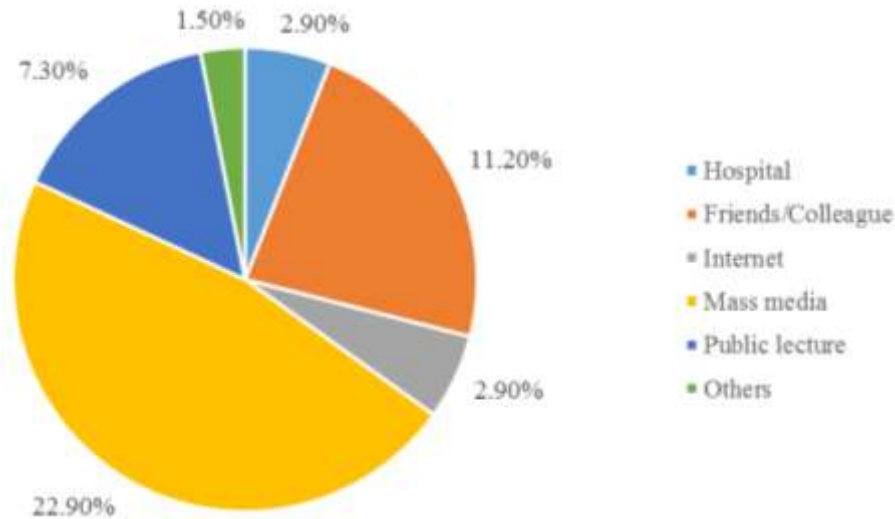


Figure 1. Source of information on awareness about condom.

statistically using SPSS version 20. Frequencies and percentages were used to describe some of the findings in tabular and figure. Association between variables were determined using Chi square test. All statistical tests were carried out at 5% significance level.

RESULTS

All (n = 410) of the respondents completed the questionnaire correctly giving a response rate of 100%, this was achieved through the entry point used in administering the questionnaires. There were 306 (74.6%) females and 104 (25.4%) males. The ages of the students ranged from 17 to 36 years with a mean age of 26.5 ± 3.9 years. The age group 22 – 26 years had the highest (52.2%) of respondents, about 9.3% of them were at age group 17 - 21 years while 24.4% and 14.1% were at other age group 27 – 31 and 32 – 36 years respectively. Only (4.9%) of the study students were married and the rest (95.1%) were not married. Christianity was the predominant religion (95.1%), while Islam accounted for the rest 4.9%.

All the respondents knew about condom and the major source of information was mass media (22.9%). The counseling and advice by their parents or guardians or care givers was an insignificant contribution to the awareness of condom (1.5%). This is depicted in **Figure 1** pictorial (Pie chart) showing the analysis of the various ways of the condom

information sources. The respondents were also asked to rate their perceived knowledge about condom and analysis of the data showed that most of them 328 (80%) assumed that they had good knowledge about condom. By using the six-question scale adopted from the family planning clinic it was observed that all those with perceived better knowledge except one scored 3 and above. So the correlation between perceived and ideal knowledge was almost 100%. In assessing the knowledge of effectiveness of condom in preventing and control of HIV and STDs compared to other forms of options, 308 (72.1%) of the student's respondents strongly agreed that condom is more effective in preventing HIV/STDs, 86 (20.9%) agreed, 6 (3.9%) did not agree or had no knowledge.

Table 1 shows the association between socio-demographic characteristics of the respondents and their knowledge about condom. The respondents at age group 22 – 26 and 27 – 31 years were more likely than to those at age group 17 - 21 years i.e. the younger ones to have adequate knowledge of condom 82.2% versus 63.1%, $p < 0.0001$. The marital status showed that those married were significantly associated with better knowledge of condom ($p = 0.037$). Although, religious related issues did not significantly affect their perceived knowledge of condom ($p = 0.237$). The respondents that are not residing in the campus (off campus) have more knowledge of condom compare to those residing in the campus (on campus) 218 (53.2%) versus 192(46.8%).

Table 1. Knowledge of condom and socio-demographic characteristic of student's respondents.

Variable	Good (n = 328) Frequency (%)	Poor (n = 82) Frequency (%)	Total (n = 410)	p-value
Age group				
17 – 21	24 (63.1)	14 (36.8)	38(9.3)	P = < 0.00011 X ² = 25.06
22 – 26	176 (82.2)	38 (17.8)	214 (52.2)	
27 – 31	78 (78.0)	22 (22.0)	100 (24.4)	
32 – 36	50 (86.2)	8 (13.7)	58 (14.1)	
Total	328 (80.0)	82 (20.0)	410 (100)	
Marital status				
Married	14 (70.0)	6 (30.0)	20 (4.9)	P = > 0.067 X ² = 13.04
Not married	314 (80.5)	76 (19.5)	390 (95.1)	
Total	328 (80.0)	82 (20.0)	410 (100)	
Residence				
On Campus	156 (71.6)	62 (28.4)	218 (53.2)	P = <0.0001 X ² = 28.32
Off Campus	172 (89.6)	20 (10.4)	192 (46.8)	
Total	328 (80.0)	82 (20.0)	410 (100)	
Religion				
Christianity	314 (80.5)	76 (19.5)	390 (95.1)	P = 0.237 X ² = 2.76
Islam	14 (70.0)	6 (30.0)	20 (4.9)	
Total	328 (80.0)	82 (20.0)	410 (100)	
Sex				
Female	248 (81.0)	58 (19.0)	306 (74.6)	P = < 0.0001 X ² = 21.02
Male	80 (76.9)	24 (23.1)	104 (25.4)	
Total	328 (80.0)	82 (20.0)	410 (100)	

Table 2. Association between knowledge and condom use.

Variable	Condom use		Total (n= 410)	p-value
	Yes (n =276) Frequency (%)	No (n = 134) Frequency (%)		
Knowledge				
Good	222 (72.1)	86 (27.9)	308 (75.1)	P<0.0001 X ² = 27.01
Poor	54 (52.9)	48 (47.1)	102 (24.9)	
Total	276 (67.3)	134 (32.7)	410 (100)	

Generally, 106 (25.9%) of the respondents admitted having current sexual partners in the last three months. Out of them, 54 (50.9%) had one current sexual partner while 52 (49.1%) had more than one sexual partner prior to their training at NIPRD. Of all these 53 respondents claimed they had used condom in the preceding 3 months. The 66 (62.3%) of respondents were also found to have used condom consistently in the last five sexual intercourses with a steady partner and 36 (34.0%) used condom consistently with a casual partner. It was also found that, 16 (15.1%) of the respondents

had not used condom consistently in the last 5 sexual intercourses. The major (76.5%) reason for using condom was for prevention of HIV/AIDS and STDs among unmarried respondents.

The association between knowledge and condom use is shown in **Table 2**, it was observed that, overall, those adjudged by the rating to have better knowledge were more likely to use condom. The difference was statistically significant at $p < 0.0001$, $X^2 = 27.01$.

Table 3 showed the reasons for the condom use, it was observed that its availability was a major factor that determined its uses among the unmarried

Table 3. Reasons for condom use.

Variable	Marital status Married (n = 20) Frequency (%)	Not married (n = 390) Frequency (%)	Total
Factors			
Availability	8 (3.1)	254 (96.9)	262 (63.9)
Affordable	2 (2.9)	68 (97.1)	70 (17.1)
Ease of use	2 (4.6)	42 (95.5)	44 (10.7)
Efficacy/Prevention of HIV/STDs	8 (23.5)	26 (76.5)	34 (8.3)
Total	20 (4.9)	390 (95.1)	410 (100)

respondents whereas the married respondents were more likely to use condom because of its efficacy in family planning, preventing STDs and affordability ($p < 0.0001$, $X^2 = 31.72$).

Reasons for inconsistent use of condom are shown in **Figure 2**, in evaluating reasons for correct and consistent use of condom among the respondents only 90 (84.9%) of the condom users did not report any error in the last 3 months. Majority ($n = 66$) of them did not use condom consistently and the reasons for this are shown in the bar chart (**Figure 2**). One of the commonest factors associated with inconsistent condom use among the respondents was non-availability of condom (6.3%) at the time of sexual intercourse. This was followed by partner refusal and knowledge of spousal's HIV status (2.9%) each. The preference for other methods of contraception was to be 2.4%.

DISCUSSION

The students on the industrial training were recruited for this study because they are one of the segments most at risk group for HIV/AIDS and STDs infections. This may be due to their sexually active age that makes them engage in transactional; indiscriminate and/or unprotected sex; leading to unwanted pregnancy; HIV/AIDS and STDs.

In this study, the respondents ages were between 17 and 36; a significant number of them were 22 - 26 years; 390 (95.1%) are not married. The age group in this study is similar to the studies that were carried out by Masoda and Govender in 2013 among Cong University students; Agaro high school Guraghae; Ethiopia and that carried out by Tadesse and Menasebo also in 2013 among secondary school students in Mekelle city; Ethiopia. In this study; both female and male participated i.e. 306 versus 104

respectively. One hundred and ninety-five (95.1%) were Christian while 20 (4.9%) were Muslim, this was comparable to the study carried out by Nessda and colleagues in 2011 (Nessda et al., 2011).

Presently there is increased awareness of condom as a means of contraception and prevention of HIV/STDs among tertiary institution students in Nigeria. This was proved by the fact that 100% of the student's respondents in this present study were reported knowing about condom. This may be due to advantage of belonging to one of the most educated segments of the societies. Also, this can be attributed to the fact that majority of the respondents in this study are within the adolescents and young adults age. This is a good indicator that prevention and control of HIV/STDs among this at risk population, prevention of unwanted pregnancy and unsafe abortion as reported by Cadmus and Owoaje in 2011. This prevention and control measure is greatly receiving a boost in our societies (Cadmus and Owoaje, 2011).

Findings from this study revealed that majority 308 (75.1%) of the respondents have good knowledge while 102 (24.9%) have no knowledge about condom. The major sources of information on condoms was mass media, this is such an effective, good, and reliable means of disseminating health information of public health significant. As in this study it was observed that estimated 22.9% of the respondents were informed about the condom through this source. This is in agreement with findings from other studies (Lou et al., 2006; Zhou et al., 2009; Long et al., 2012). Also, in evaluating factors associated with condom use among college students in China by Long et al. (2012), it was found that mass media has replaced the school education that was recognized as the most vital source of reproductive health knowledge among youth. The mass media is a practical way of disseminating health

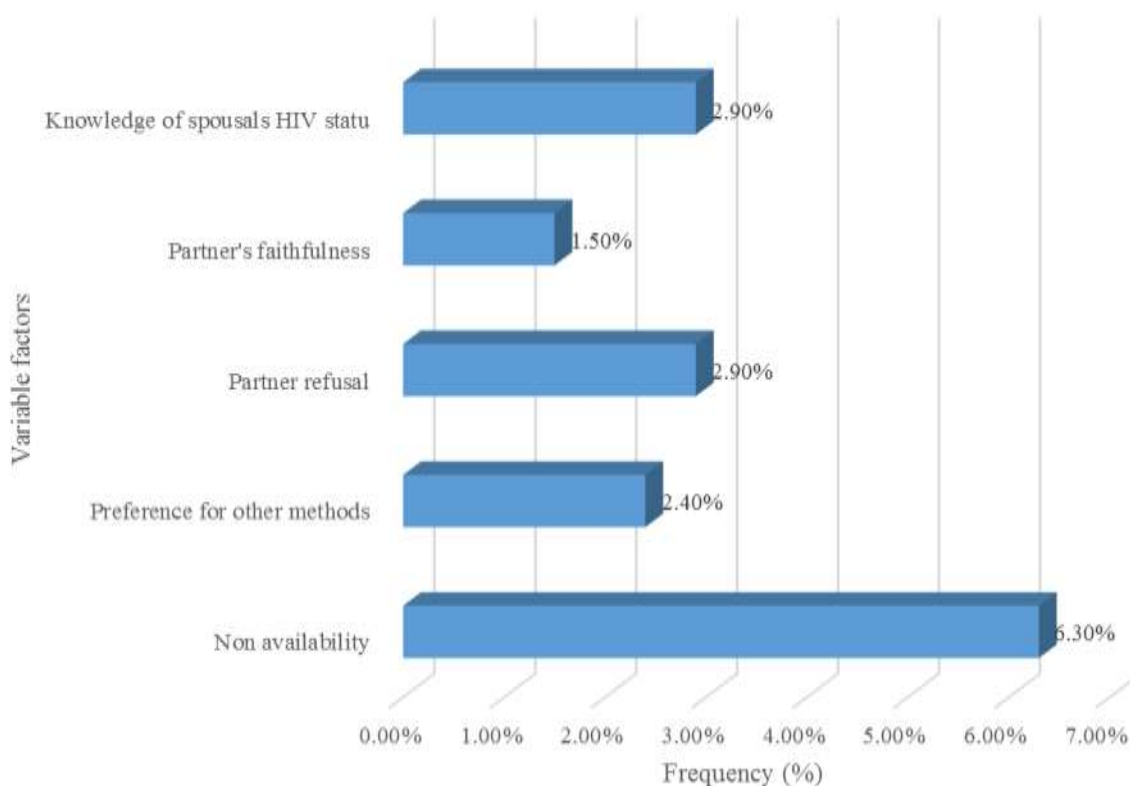


Figure 2. Reasons for inconsistent use of condom.

information to youth according to Lou et al. (2006) and Zhou et al. (2009). Sources of information spreading are usually critical challenges in the knowledge acquisition and problem solving. This therefore, denotes the use of mass media as a paramount important strategy in promoting condom usage as a means for HIV/STDs prevention and control. This informs Federal government of Nigeria, international donors, NGOs, health educators and policy makers on important areas to target in disease and other infection prevention and control as also reported by Ogbe in 2011.

There was a significant knowledge gap between perceived knowledge i.e. what they assumed they know and actual (i.e. ideal) knowledge that were discovered in this present study that needs to be seriously addressed in the future. This is because of its importance in information dissemination and as a problem solving tools.

This study revealed that a very low proportion of students on training indulged in sexual activity as it was observed that only 25.9% of the respondents reported having sexual intercourse in the last three

(3) months. Also, a significant proportion (49.1%) of the studied students have multiple sexual partners. This is in agreement with the findings by Eaton et al., (2008) who reported a similar result 47.8% among American youths studied, aged 10 - 24 years that had indulged in sexual intercourse. This is lower than the results reported in other studies in Nigeria by the National Demographic Health Survey in 2008 (NDHS, 2008). However, it had been suggested that parental education should be recommended on how to bring up their young ones towards a better lifestyle (Roche et al., 2005).

In this study, better knowledge of condom correlates positively with its usage and those age group (22 years and above) was associated with better knowledge. One of the frequent reasons for inconsistent condom usage among the respondents in this study was non-availability of condom at the period of sexual intercourse. Therefore, condoms should be provided free or at affordable or subsidized price and made readily available at special designed points at bars, clubs and sexual health clinics to youth. Adequate related interventions measures

such as provision of skills on one to one basis and information be made available. This will significantly contribute to the reproductive health need of the youths. It was reported by Bourne and Robson in 2009 that committed sexual partners often think their sex is safe enough to stop using condoms. But, protections and safety will rely upon each partner being screened for HIV and STDs, and the partners remaining monogamous (Bourne and Robson, 2009).

Another important reason for inconsistent condom use in this study was partner's refusal. Although, this is may be due to knowing the HIV status of the partners, being married, perceived decrease sexual pleasure or monogamous relationship. However, it is reported in a study carried out by Bankole and co-workers in 2007, that youths have high levels of awareness but low in-depth of knowledge about pregnancy (sex education) and HIV prevention (Bankole et al., 2007). The finding from our study showed that younger ones who involved in early sexual activity are more at greater risk for a wide range of sexual and reproductive health problems, as early initiations of the sexual activity is associated with reduced or minimal condom usage. Therefore, sex education strategies should be enhanced, focused and put in place at earlier age for the youth as suggested (Ma et al., 2009).

In this present study, it is observed that there is no significant influence of religion on condom usage compared to some other previous studies. For instance, Titilayo and co-workers in 2009 reported that level of religiosity was a significant indicator of attitude towards condom use and knowledge of HIV/AIDS prevention (Titilayo et al., 2009). The findings from this study also revealed that it is a Christian dominated area 390 (95.1%), thus, further study is suggested to assess the possible influence of any other religion on condom use.

The widespread assumptions and speculations about condom use was in contradiction with this study, especially among the student's respondent's population that are at high risk of acquiring HIV/STDs, thus, much still needs to be done in terms of in-depth understanding of attitude and practices regarding consistency and correctness of condom use. Also, there is need for greater effort in scaling up youth HIV/STDs intervention in prevention and control programmes. Adolescent policies on sexuality and contraception should be enhanced, thus, Federal government commitment is needed in order to provide enhanced resources and enabling

environment for health education.

The ability and strength of this study is that it captured the attitude of the sexual activities among young segment of the Nigerian tertiary institution population towards condom. This group is most vulnerable and prone to HIV/STDs. Therefore, the need for interventions to prevent deadly menace (HIV and STDs) is of great importance. The findings from this study in NIPRD, Abuja could be a kick back of condom knowledge and usage by other tertiary institutions in Nigeria.

CONCLUSION

The study sought to explore the knowledge, attitude and practices on condom usage and self-reported sexual practice among students on industrial training to NIPRD, Abuja. Knowledge, attitude and practices (KAPs) are important tool for HIV/AIDS and STIs preventions and controls. Despite the presence of adequate knowledge; positive attitude of the student's respondents on industrial training had less condom use practice. The study highlighted some risky sexual practice; this might be related to low awareness towards condom usage practice; which needs to be seriously addressed because of its paramount importance. However, the awareness of condoms as an effective contraceptive method as well as protection against HIV/STDs has increased in the recent years.

Finally, until there is a cure or vaccine for HIV, consistent and correct condom use is a very reliable and effective source of protection for sexually active persons. The barriers to using condoms and educating people about the risks of HIV and other sexually transmitted diseases need to be overcome. Large proportions of the world population, especially in Africa are dying because of complications related to HIV/AIDS. This is a big problem that needs to be addressed in order to prevent more losses to this overwhelming epidemic. Therefore, condom should be made available and affordable when the need arises.

RECOMMENDATIONS

This research work calls to implementation of specified; focused; continued and strengthened health education on condom use and practices; HIV/AIDS/STDs related challenges and HIV/STDs

information disseminations opportunities (mass media, IEC, clubs) be designed in our tertiary institutions in Nigeria closer to the students. This will further reduce HIV prevalence from 1.4% in 2019 to more appreciable level.

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CONFLICT OF INTEREST

The authors confirm that this manuscript content has no conflict of interest.

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